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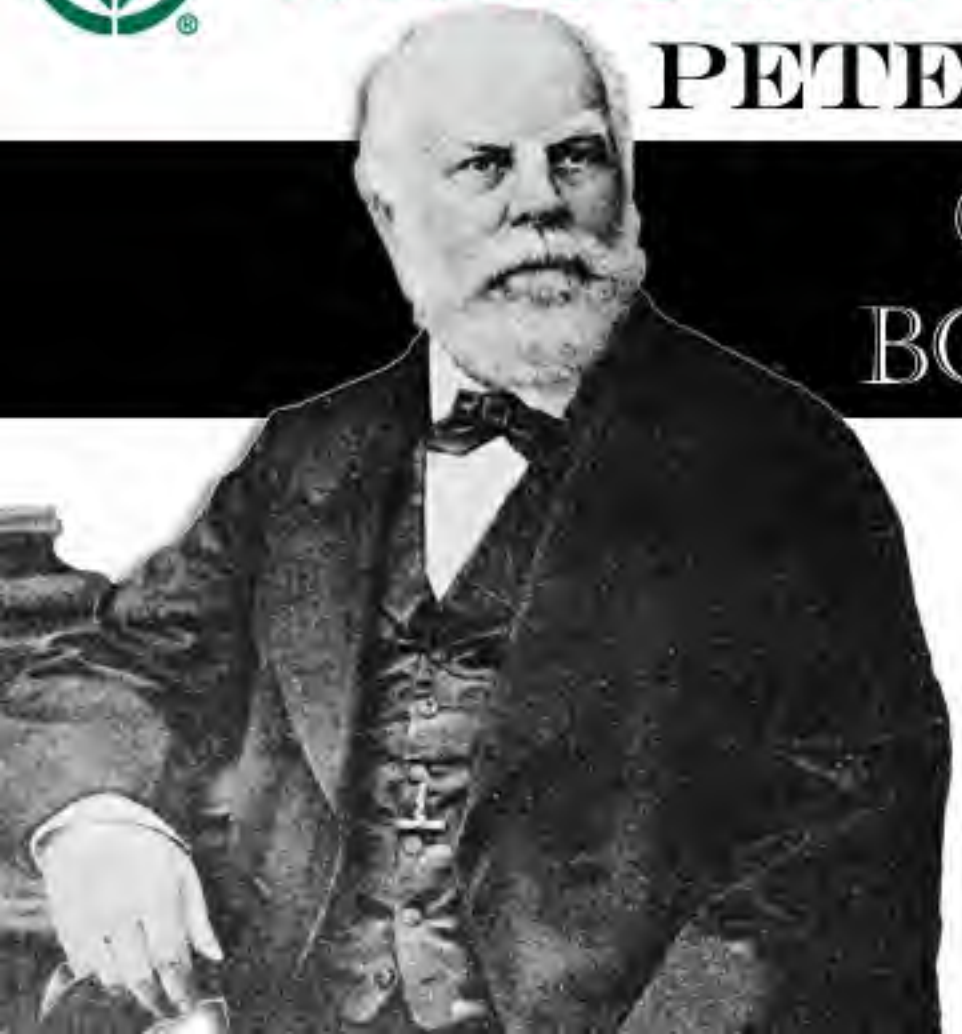
George Engelmann Botanical Notebooks



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RUNNING VINES.

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Balloon Vine	10 cents.
Balsam Apple	10 "
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" " Scarlet	10 "
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Morning Glory, Mixed	10 "
Nasturtium, Mixed	10 "
Smilax	
Sweat Pear, Mixed	
Thumbergia "	

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is built. Some
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...ents, constantly extended to the west. Two thousand years ago Paris
the northeast slope of Mount St. Genevieve, where the arenas
been discovered. Under the Mesoringians it commenced its
the west, and has unceasingly progressed in that direction ever
...wealthy classes have a pronounced tendency to emigrate westward,
leaving the eastern districts for the laboring populations.

This remark applies not only to Paris, but to most great cities, London, Vienna, Berlin, St. Petersburg, Turin, Liege, Toulouse, Montpelier, Caen, and even Pompeii; in this country to St. Louis, Boston, Chicago and many others.

Whence arises this tendency? It can not be laid to the influence of rivers upon which cities are built, which might be supposed to take their population along with their current, for many streams flow in a contrary direction to the tendency of the extension of the population, as the Thames, upon which London is built. Some have attempted to explain it by the direction of the wind, the east wind tending to rise in the greatest degree the barometrical column, while the west wind tends to lower it, and therefore inundates the eastern part of the town with smoke and deleterious cases.

Peahaps the love all people have, though all may not be able to express it, or perhaps are not really cognizant themselves of possessing it, (yet we believe all human beings have more or less love for the beautiful in nature,) tends to draw their faces to the west, there to view the splendors of a setting sun, and to catch

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of Grcece as a presage of death to many of their numbers. After the capture of Fidenes, drops of blood fell from the sky, to the great surprise and mortal terror of all men. In 570 it rained blood for two days in Rome, In 538 a heavy shower of blood fell at Rome and Aricia. In 654, the sky seemed on fire in Garll, and showers of blood fell from the heavens, spattering and staining the houses and clothes of people, who cast them off in great terror. In 1181 there was a shower of blood throughout France and Germany; there appeared a luminious cross in the heavens. In 1669 a shower of a redish, thick viscous and putrid liquil, fell in France, resembling blood, staining the grass, clothing and all exposed to it, a purplish hue; walls were splashed all over with it, and large drops were seen upon the walks and roadways. Showers of blood fell at Cleves in 1763, at Picardy in 1763, and in Italy in 1803. During a shower in 1813, drops of blood fell, spatting the walks and houses in Naples and Calabrias. Drops of a red fluid, like blood, fell spatting the clothes and houses, in Rome in 1870; the same was noted in Naples in 1869. Showers of blood fell in England in 1846, 1869 and 1870.

During a shower of blood that fell at Aix, M. De Peirese examined some of the red spots, and discovered that the supposed blood stains were produced by a

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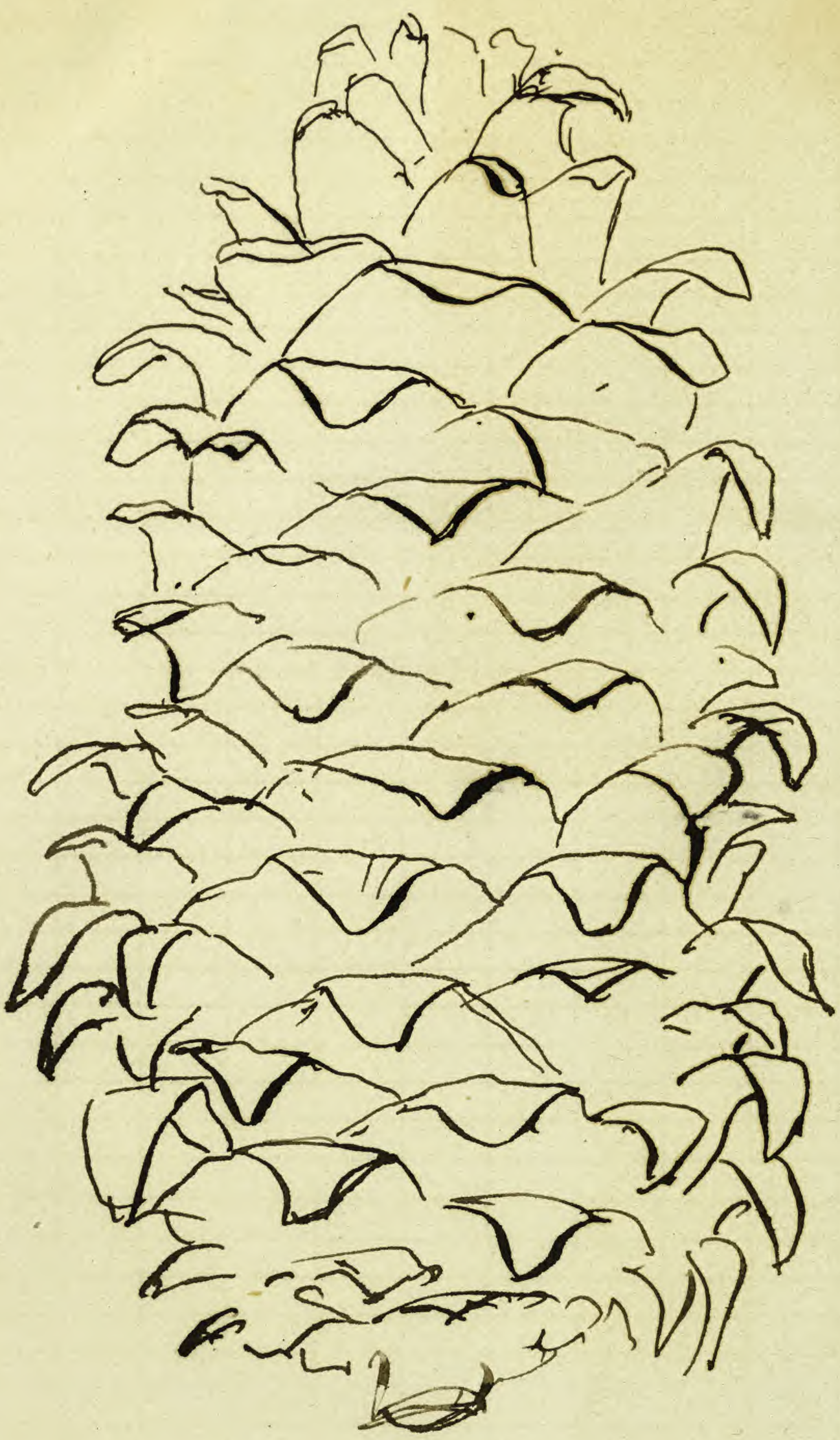

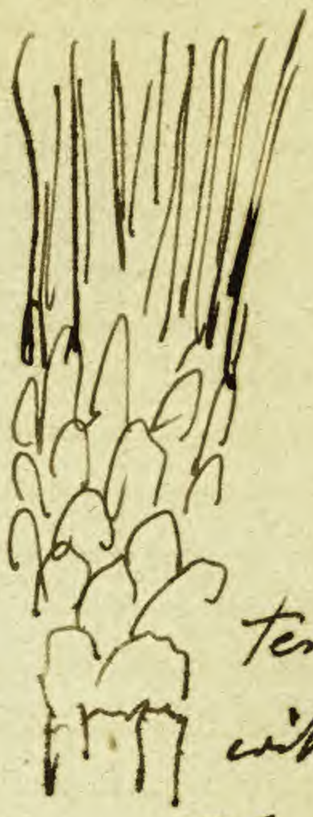

Terminal bud
with staminate
scales foliaceous

Pinus Koraiensis
Sieb & Zucc.

cf Murray
Jap. Conif. 1863
U. S. Dep.

K. Jap. 2 28
(1842)

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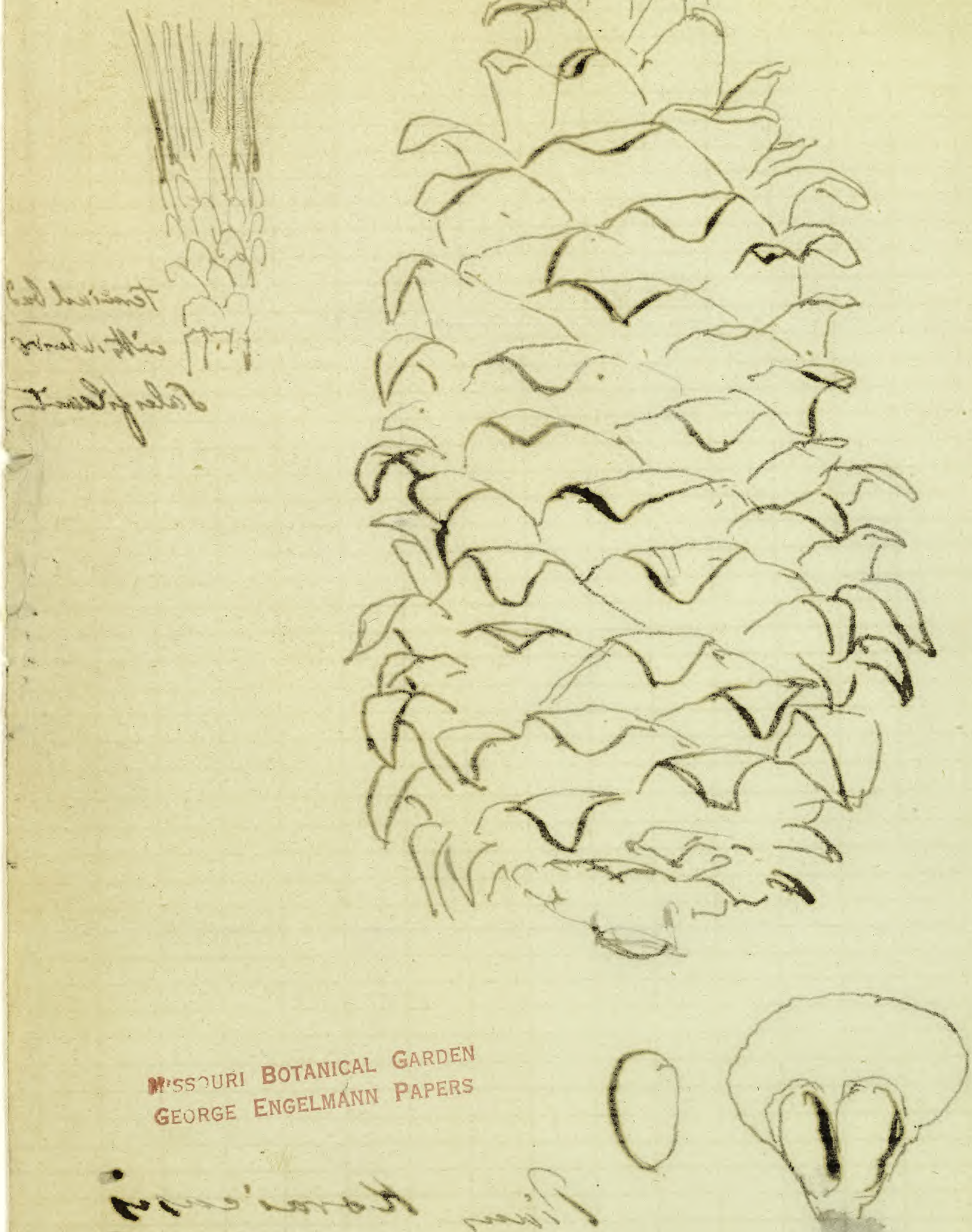

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The President, Dr. ENGELMANN, in the chair.

Six members present.

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May 22 1862

Picea excelsa

grey plants Hook Col Miss 100

turio

scales acute, mucronate, spreads sometimes reflexed; margin scarcely slightly fimbriate

scales light yellowish brown tip and edges darker

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ALEX. LEITCH.
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Peripheral

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was invariably found upon the right side of the body. Although bats usually have

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color, mostly white a
; a whitish tuft at base
twelve inches; tail one
nited States.
HOARY BAT (*A. Cinerens*
rs marked with black;
e-fourth inches; entire
G-EARED BATS (*Genus*
cessively large; an inc
aw, three on each side
G-EARED BAT (*Corynorh*
three and one-half inche
inhabits from Virginia
ese include all the bats
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The descriptions were
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oon as possible, to take ca
is small. Both these fac
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a naturalist found that tw
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brown color, mostly white at the tips of the hairs; lips and ears not edged with black; a whitish tuft at base of thumb; length three and three-fourths inches; extent twelve inches; tail one and three-fourths inches; everywhere abundant in the United States.

HOARY BAT (*A. Cinerens*).—Rich chocolate brown, overlaid with white; lips and ears marked with black; length five inches; extent fourteen inches; tail two and one-fourth inches; entire United States, rather northern, and a rare species.

BIG-EARED BATS (*Genus Corynorhinus*).—Cheeks with two large excrescences; ears excessively large; an inch high; teeth 36; incisors two on each side in the upper jaw, three on each side in lower jaw.

BIG-EARED BAT (*Corynorhynus Macrotis*).—Color blackish; fur soft and long; length three and one-half inches; extent eleven inches; tail one and three-fourths inches; inhabits from Virginia to Missouri region and South.

These include all the bats in the eastern United States, and by the foregoing short but precise diagonisis anyone can distinguish to which species a specimen may belong. The descriptions were taken from Prof. Jordan's new work upon the vertebrates of the United States.

Bats inhabit all portions of the world except the colder regions. There are a great many species, which differ much from each other. Our own harmless little species, when taken, bite furiously. They are very vindictive and difficult to tame, but when once subdued form very pleasing pets, and feed upon flies and gnats. It is, as has been before stated, known that bats make no nest for their young, or in any other way care for their offspring, except by carrying them hanging to their fur, whether during flight or while suspended at rest by the legs. From the above we would infer that the young bats are born in an advanced condition, so as to be able, as soon as possible, to take care of themselves, and that the number produced at a birth is small. Both these facts are true. The usual number of young are only two, sometimes only one, while occasionally four to five are produced. In one case a naturalist found that two unborn bats weighed two-thirds as much as the parent, and the average of twenty individuals gave the weight of the young as four-tenths that of the parents. The uniformity in the number of young produced at a birth with each species is very striking. Twenty-two of one species had each two young, while forty of another had each one. In the former case the young were placed one on each side of the body, while in the latter case the single young was invariably found upon the right side of the body. Although bats usually have only two nipples, the American atalapha noveboracensis has an extra pair. One of the most remarkable facts in connection with this subject is the power the mother bats have to carry such a weight of young in addition to their own. A bat can carry nearly double its own weight. Another striking fact is the isolation of the females with young. In many caves and hollow trees where from twenty to one hundred females with young were found, either no males were found, or only one or two. In one large hollow tree one hundred males were found and no females. In another were found about an equal number of females, with only a few males "here and there."—*Prof. B. G. Wilder.*

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The embryo bat resembles the ordinary small animal (mammal), the long fingers and persistence of the web between them, and its continuation from the border of the body and tail, are features of later appearance.

In conclusion we will say that bats bring forth their young alive and nurse them at the breast by milk; have red blood corpuscles containing no nucelous; are clothed with hair, and possess a corpus collosum, that is, a band of fibers connecting the two cerebral hemispheres. The ovum or egg is very small.

Bats are all included in the sub-order cheiroptera (handwinged). Bats are generally nocturnal animals, spending the day in caves and hollow trees. They are found in all portions of the world except the very coldest, but are most numerous and of the greatest size in the tropics. Those of the temperate regions of the globe generally spend the winter in a state of torpidity, in which, although circulation continues very languidly, respiration does not ordinarily take place. The bats of the temperate climates are all small, the largest British bat being only fifteen inches in stretch of wings, and its body not so large as a mouse. The United States bats are all of small size, the largest being only fourteen inches stretch of wing. But in the tropics bats are of great size, the kalong being five feet stretch of wing. Many bats have a peculiar leaf-like appendage attached to the nose, resembling a horseshoe. In others the ears are wonderfully large. Some of the species are gregarious; others are found only singly or in pairs.

TWILIGHT.

Twilight is that light that remains after the sun has set, or which is seen just before sunrise. The duration of twilight is, in many respects, an interesting and useful element to be acquainted with. It depends in a great measure upon the angle to which the sun has descended below the horizon, but it is modified by several circumstances, the chief among which is the degree of cleanness of the atmosphere. The direct light of the sun at the time of sunset reaches to the West; as the sun sinks its boundry line rises, and some little time afterwards crosses the Zenith, when civil twilight ends; the planets and large stars then become visible to the naked eye. The eastern half of the sky being thus first deprived of direct solar light, night begins there. Afterward, the boundry line (the crepuscular curve) itself disappears in the west; then the astronomical twilight ceases and night has fully set in. Twilight begins or ends when the sun is at a certain distance below the horizon; this distance is variable, depending upon the state of the atmosphere. It may be taken that civil twilight ends when the sun is about 8° below the horizon, and that astronomical twilight ends when the sun is 18° below the horizon. The phenomena of twilight are hardly kuown in tropical climates; as soon as the sun has descended below the horizon darkness sets in suddenly. This was remarked by Bruce at Sengal, where, however, the air is

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11550

Hothouse & Greenhouse Plants—continued.

TEA-SCENTED ROSES—continued.

Melville, pinkish lilac.
Safrano, bright apricot in the bud, changing to fawn when expanded.
Souvenir, d'un Ami, rose, very large, good shape.
Triomphe de Luxembourg, coppery rose; very fine.
Bon Silene. This variety has proved one of the best for winter forcing; color purplish carmine, with very light shade of orange; it is a true Tea-scented Rose, being extremely odoriferous; good grower.

MOSS ROSES.

35 cents each; $3.50 per dozen.

Baronne de Wassenaer, bright rose; large.
Crested, rose, with crested bud.
Citzome, pink.
Darcet, crimson.
Elizabeth Ross, rose, very full.
Gloire de Mosseseus, pale rose, very large, vigor's.
Henry Martin, white, pink tinted.
James Veitch, deep violet, shaded crimson; large and double.
Madame Edouard Ory, reddish crimson.
Madame Lambert, deep rose.
Lane, crimson, medium size.
Prolific, or Perpetal White Moss, white, very pretty in a bed.
Princess Adelaide, light rose, vigorous; one of the best.
Reine Blanche, pure white; large and full.
Rouge Amelian, ruby red.
Salet, rosy pink.
William Lobb, crimson.

HARDY CLIMBING ROSES.

Hothouse & Greenhouse Plants—continued.

HYBRID PERPETUALS—continued.

Charles Lefebre, fine, bright dazzling crimson scarlet, shape and form good.
Charles Margottin.
Charles Verdier, fine rose, bordered with white, very large and full.
Comtesse de Paris, bright crimson, large cupped form.
Comtesse de Oxford.
Duchess of Sutherland, delicate pink, beautiful.
Duchess d'Orleans, fine lavender blush, very full and good.
Edward Morren.
Elizabeth Vigneron.
Eugene Verdier, rich, very large, full, superb in color and form.
Francis 1st, deep red, dwarf, extra fine.
Geant des Battailles, brilliant crimson scarlet.
Gen. Washington, rosy carmine.
Gen. Jacqueminot, brilliant crimson scarlet, very fine.
Gloire de Santenay, crimson scarlet flowers, of great substance, fine.
Hippolyte Jamani.
Imperatrice Eugenie, pure white, with rosy centre.
John Hopper, fine rosy crimson, back of petals fine lilac tint, large and full.
Jules Margottin, vivid rosy carmine, large, very showy, fine vigorous habit.
La France, beautiful rosy lilac, very distinct, large and full, free blooming; one of the best.
La Reine, brilliant rose, large and very full.
Lady Emily Peel, French white, shaded flesh; very beautiful.
Le Baron de Rothschild, brilliant
Leopold Premier, bright deep red, perfect form, large and double.
Lord Palmerston, cerise, flowering in clusters.
Madame Caillat, clear rosy red, large, fine form.
Madame Charles Verdier, dark coppery rose, very large, full, and deep imbricated form.
Madame Charles Wood, vivid crimson, shaded purple, large, fine, bold grower.
Madame Domage, bright rose color, very large.
Madame Eugene Verdier, bright rose, very large and full.
Madame Hector Jacquin, rosy lilac, very large.
Madame Laffay, rosy crimson.
Madame Masson, deep reddish purple; very large.
Madame Victor Verdier, vivid carmine, large, full and magnificent shape, intense in color; very fine.
Marechal Vaillant, bright crimson; very large and fine.
Paul Neyron.
Pius IX.
Prince Camille de Rohan, very dark crimson maroon, richly shaded, full, large and superb.
Reine Blanche, white, tinted with rose; flowers large; fine form.
Reynold's Hole, pleasing pink, hollow shell-shaped.
Souvenir de Charles Montault, bright red.
Souvenir de Lady Eardly, brilliant crimson, free bloomer.
Souvenir de Leveson Gower, rosy red, large and beautiful.
Triomphe d

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1455

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Flexiles

fol 5 Heath Dendr. - Leaves smooth 3/4 or nearly so

Plexilis adscendens Pygmaea

comes apical

exceeds Large, almost wingless

ents periph. mostly dorsal without attaching fully

ternate (1-3 series) on back, or incomplete

OFFICE OF SECRETARY OF STATE,

INDIANAPOLIS, IND., May 15, 1877.

We take pleasure in extending our commendation of the projected "TOUR AROUND THE WORLD," *now being arranged for, under the management of* MR. JAMES O. WOODRUFF *and* GENERAL DANIEL MACAULEY. *Our personal acquaintance with these gentlemen assures us that the objects of the expedition will be faithfully carried out. We earnestly hope that the scientists of the country will give this enterprise such encouragement as its objects and management deserve.*

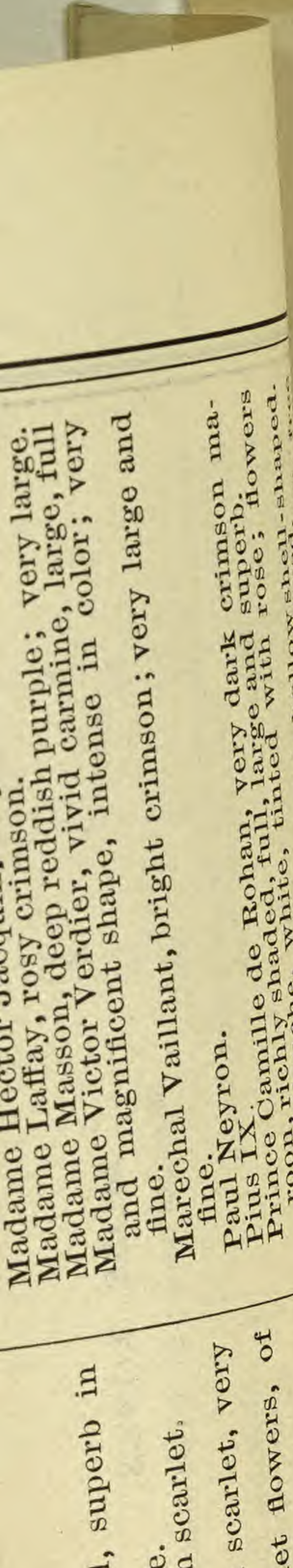
JAMES D. WILLIAMS,

Governor.

JNO. E. NEFF,

Secretary of State.

515-7


Madame Hector Jacquier, very large.
Madame Laffay, rosy crimson.
Madame Masson, deep reddish purple; very large.
Madame Victor Verdier, vivid carmine, large, full and magnificent shape, intense in color; very fine.
Marechal Vaillant, bright crimson; very large and fine.
Paul Neyron.
Pius IX.
Prince Camille de Rohan, very dark crimson maroon, richly shaded, full, large and superb.
Reine Blanche, white, tinted with rose; flowers large, full, hollow shell-shaped.

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Announcement.

Having heretofore issued a preliminary statement in order to ascertain from public opinion and enlightened private judgment whether a scientific expedition around the world would receive such assurance of support as would make it practicable, and having received so favorable a response, in the number and character of the applications for membership from all parts of the country, together with such endorsement and encouragement from the authorities of the National Government as must remove all rational doubt, it is now confidently announced that the expedition will start upon the proposed voyage October 1, 1877. The very general approval of our scientific men and educational institutions, with the indispensable information amply supplied by them, enables the management to present in this concise form all essential details of the plan, and full instructions for those desiring information regarding it.

THE PURPOSE.

The purpose of the expedition is to visit points of general and special interest on a route around the globe, to study the arts, archæology and present condition of the better known countries, and the geology, geography, fauna and flora, as we

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reins zur Beförderung des Gartenbaues, 1860, Nos. 1–52—1861, Nos. 1–6, Berlin, *from the Society;* Atti della Societa Ital. di Scienze Nat., Milano, Vol. II., Fasc. 2, 1860, *from the Society;* Atti dell I. R. Istituto Veneto, T. V., Ser. iii., Disp. 10—T. VI., Ser. iii., Disp. 1–3, 1860–1, *from the Society;* Visir-und Recheninstrumente von Ernst Sedlaczeh, Wien, 1856,—Rechenschieber, von E. Sedlaczeh, Wien, 1856,—Kompendium der ebenen und sfärischen Trigonometrie von E. Sedlaczeh, Wien, 1856, *from Mr. Senoner;* L'Ortolano, Giornale Popolare d'Orticultura, Trieste, Anno I. 1–12, III. 1–9, 1859–60,—Allocuzione da Prof. Adolfo Stopice, Trieste, 1860, *from the Society;* Fr. Ambrosii Flora Tiroliæ Australis, Vol. II., Pt. 4, *from the Author;* Verhandl. des Naturh. Vereins, Bonn, Jahrg. XVII., 1–2, 1860, *from the Society;* Sitzungsb. der K. K. Akad. der Wissenchaften, Wien, Band XLII., No. 22–28, 1860, *from the Society;* Nachrichten von der Georg-Augusts-Univ. u. der K. Gesellsch. der Wissensch., Göttingen, 1860, No. 1–29, *from the Society;* Bull. de la Société Linnéenne de Normandie, Vol. V., 1859–60, Caen, 1861, *from the Society;* Mém. de l'Acad. Imperiale de Metz, Ann. XLI., 1859–60, *from the Academy;* Jahrbücher des Vereins für Naturk. in Nassau, XIV. Heft, Wiesbaden, 1859, *from the Society;* Dr. J. C. Ed. Hoser's Rückblicke, Prag, 1848, von Dr. Weitenweber,—Sitzungsb. der K. böhm. Gesellsch. der Wissenschaften, Prag, 1859, Juli–Dec.—1860, Jan.–Juni, *from the Society;* I. Bericht des Offenbacher Vereins für Naturk, 1860, *from the Society;* Würzburger Medicin. Zeitschrift, II. Band, 1–2 Heft, 1861, *from the Society;* Der Zoologische Garten, von Dr. D. F. Weinland, Jahrg. II., No. 1–6, 1860–61, *from the Editor;* XX. Bericht über das Museum Francisco-Carolinum, Linz, 1860, *from the Institution;* Monatsb. der K. Preuss. Akad. der Wissenschaften, 1860, Berlin,—General Register, 1836-58, Berlin 1860, *from the Academy;* Gelehrte Anzeigen, Vol. 49 & 50,—Sitzungsb. des K. bayer. Akad. des Wissenschaften, 1860, Heft 1–3, München,—Verzeichniss der Mitglieder, 1860,—Bedeutung der Sanskritstudien, von Dr. Wilh. Christ, 1860,—Denkrede auf. Alex. von Humboldt, von C. F. P. von Martius, 1860,—Grenzen und Grenzgebiete der physikalischen Forschung, von Dr. C. Harless, 1860, *from the Royal Academy;* Proc. Acad. Nat. Sciences, Philad., May, 1861, *from the Academy;* 43d Ann. Rep. of the Trustees of

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Dr. Koch presented specimens of quartz and of the silicious conglomerate from Madison County mentioned in Dr. Hilgard's letter.

Dr. Engelmann stated that the mean temperature of July (77.°5) had been lower than the usual mean of that month, and that the fall of rain during the same month (2.04 inches) was about one-half less than usual.

Dr. Wislizenus stated that the mean of atmospheric electricity of July had been 3.5° less than that of the month previous, and that the amount had been gradually decreasing since winter.

August 19, 1861.

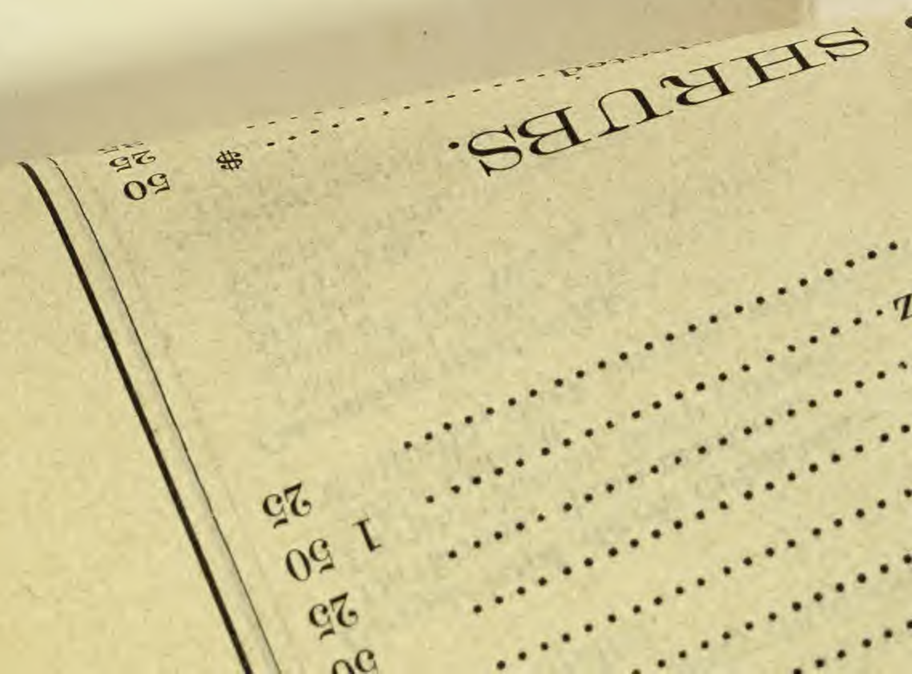
The President, Dr. ENGELMANN, in the chair.

Six members present.

A letter was read from A. F. Bandelier, Jr., Highland, Ill., Aug. 1, 1861, communicating meteorological observations at Highland.

The following donations to the library were received:

Bull. de la Société Géologique de France, Ser. ii., T. XV
13–14, 22–31, Paris, 1861, *from the Society*: Proc. A
Philad. [illegible]



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FRUIT.

Apple Trees, choice varieties	$ 25
Peach Trees, ten kinds, early and late	25
Plum, Cherry, Pear and Apricots,	35
" " " extra large, four years old	50
Crab Apple, Quince and Nectarine,	25
Currants, Gooseberries, Blackberries and Raspberries, per doz	1 50
Grapes, ten varieties of the best kinds	25

SHADE TREES AND SHRUBS.

Elms, Ash, Maple, Poplar, large trees, ten to fifteen feet high, selected	$ 50
" " " " small trees, ten feet high	25
Mountain Ash, Mulberry and Horse Chestnut,	35

SHRUBS.

Altheas, Deutzias, Honeysuckles, Mock Orange, Sperias, Japan Quince, Purple Fringe, etc	
Extra Large Plants of the above	

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Hothouse & Greenhouse Plants—continued.

VERBENAS.

We have placed Verbenas in sections to give purchasers an idea of their relative colors. There are so many names nearly duplicates of each, and so many with extravagant descriptions, which by this method are all avoided.

Purple and dark crimson—
Darkness, deep maroon.
Purple Queen, deep purple.
Sable Queen.
Wathalla, dark purple, white eye.

Carmine and pink—
Colossus, rose, yellow eye.
Gem of the West, large pink.
Mattie.
St. O'Syth.
Venus, pink, white eye.

Scarlet, crimson—
Defiance.
Fire Ball.
Sunbeam.
Scarlet Circle.
Mrs. Field, rosy scarlet.
Mrs. Woodruff.
Wm. Young, large deep scarlet.

Crimson—
Brilliante de vaise.
Giant of Battles.
Rover, deep red, white eye.
Rev. J. Smith.
Velvet Mantle.

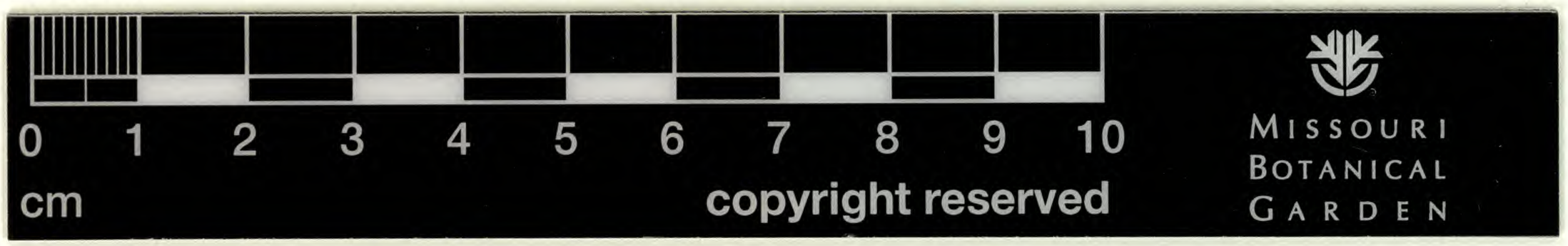
Blue and shades of blue—
Blue Bird, light blue.
Mrs. Sterling.
Violacea.

White—
Souvenir, white.
White Beauty, large.
White Fawn, pure white.

Striped—
Bizarre.
Moenettia coccinea.
Zebra.

VIOLETS, Sweet Scente .

1154



Pl. 11.

8.

7.

a. b.

L. Gast lith.

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Pinus nivea Booth

ex Knight, Syn. Conif 34

See Carrière p. 305

"North west of U. States"

5 leaves very glaucous

May it not be ~~an abbreviation~~ ?

Monstrosity ?

Variation ?

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H. Riehl & Co.
DRUGGISTS
Southwest corner Fifth and Market Sts.
St. Louis, Mo.

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Pinus muricata (P. Benthamiana End Coltr)

1. P. monophyllos Torr & Frem. (1845) leaves 1. 2 mm
2. P. edulis Eng. 1848 (P. Fremontiana Jordan) 1848 2 1.5 m
3. P. aembroides Jacq. 1832 (2-3 leaves) " 3 1 mm

Syn P. Llaveana Schiede (3 leaves)

P. osteosperma Eng. (2-3 l)

4. P. Parryana Eng.

Syn P. Llaveana Torr 3-5

1 inch

P. aembroides Roseberg does not belong here

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Shrewsbury.

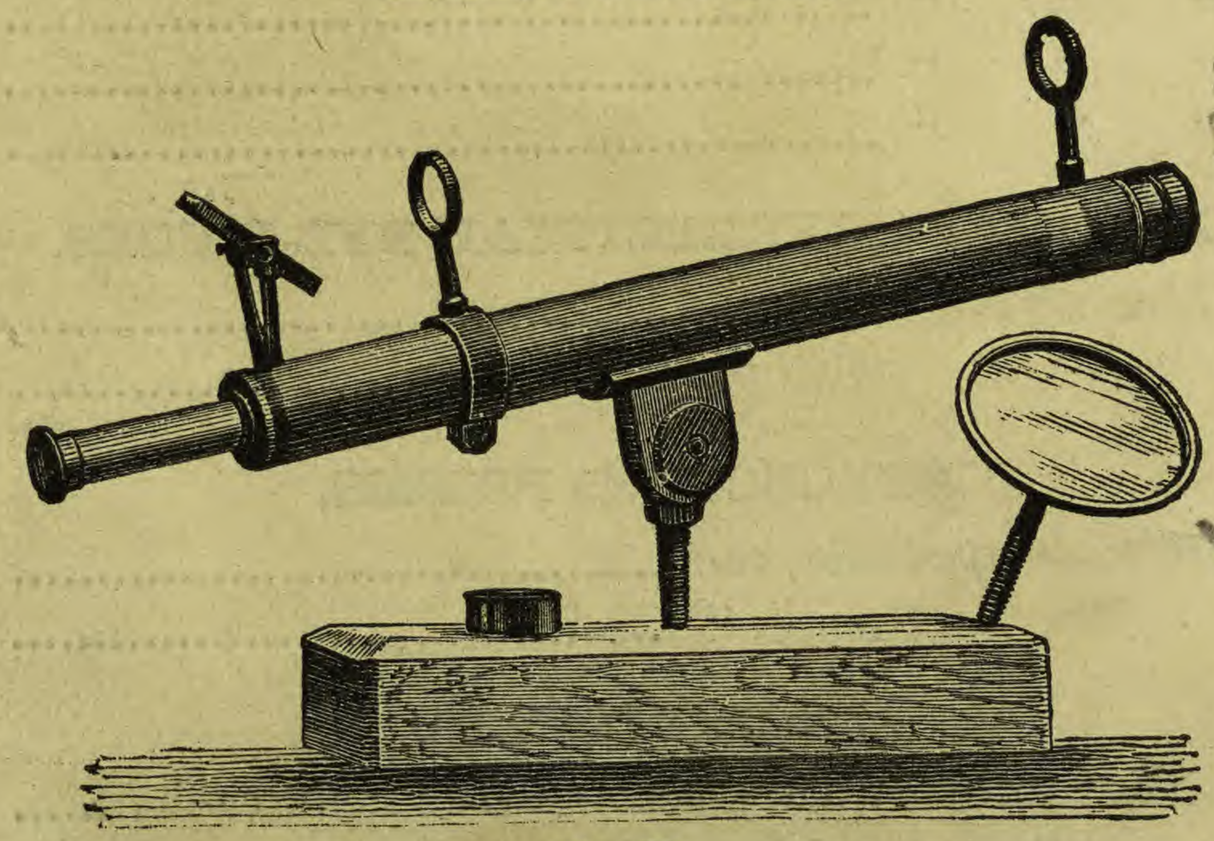
Octob. 11. 1861.

Dear Doctor

At the instance of Henry I hereby send You Specie Dft on Barnet for £ 550.00 his Salary Clear him. I got the Dft from a friend as I cant hurry & pay a premium. I expect to be on St Louis. Saturday

No. 78.—Same, with 5-inch needle..... 30.00

HELIOTROPES.



No. 79.

No. 79.—As made by us for the United States Coast Survey. The telescope body is an iron tube ; a wood screw with joint is attached at the middle, so that it can be screwed to any tree or post. Mirrors of plate-glass. Price, in box..... 30.00

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2	"			"	.....	16.00

TERRESTRIAL EYE-PIECES FOR DIRECT VISION.

2	to	3	inches	long, each	.....	7.50
4	"	5	"	" "	.....	8.50
6	"	7	"	" "	.....	10.50
8	"	10	"	" "	.....	15.00

DIAGONAL TERRESTRIAL EYE-PIECES.

From 5 to 7 inches long, each	.....	20.00
" " " " with pancratic draw	.....	25.00

REFLECTING PRISMS.

$\frac{3}{8}$-inch square with sunshade, each	.....	5.50
$\frac{1}{2}$ " " " " "	.....	8.00

MICROMETERS.

Eye-piece Micrometer (filar), screw 100 to inch, each	.....	55.00
" " with position circle reading to minutes, from	.....	70.00 to 120.00
Reading Micrometers, with achromatic objective	.....	65.00
Double Image Dynameter, to measure magnifying power of telescopes	.....	100.00

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